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Research Article

RISK ASSESSMENT FOR WORK HEALTH AND SAFETY: A UNIVERSITY DINING HALL

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Abstract: *With the development of working life, work health and safety has become an area of great importance. Currently preventing occupational diseases and work accidents that may occur as a result of the work environment or work conditions, and protecting the health, and ensuring the full well-being of working individuals are among important topics. The increase in work accidents linked to the intense workload, rapid growth, and increased employment in the dining hall sector is emerging as a large problem. This research was performed to take precautions to solve problems emerging in terms of work health and safety in the dining hall sector, completed risk analysis to determine hazards and risks in a university dining hall. Precautions and implementations taken about the topic were evaluated within the framework of the Occupational Health and Safety Law No. 6331 by investigation in terms of work health and safety for accidents, risks, and occupational diseases that may occur in the dining hall. This research was performed using the L-type matrix (5 x 5 matrix table) method. The identified hazards and risks were classified according to risk level (significant level of risk: 15, moderate level of risk: 32, the acceptable level of risk: 3). Precautions were determined as a result of the risk assessment in order to make work conditions healthier and safer. With this study, experiences of work accidents and occupational diseases will be prevented contributing to protecting employee health, while benefits will be provided by ensuring awareness in other workplaces. Additionally, it is considered that adopting proactive approaches within the scope of work health and safety is an important factor in terms of popularizing work safety culture in working areas.*

Keywords: *Dining Hall, Work Safety, Risk Assessment, Work Health*

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1. Introduction

Work safety and protecting the health of employed individuals comprise an important dimension of working life and legislation. If appropriate precautions are not taken about technological developments, the increasingly competitive environment, and the rapid operation of industrial life and mechanization in developed and developing countries, effects may be induced which disrupt the health integrity of employed individuals. The definition of work health and safety emerged with the aim of removing or reducing health problems and occupational diseases that employees are exposed to as a result of changing conditions in the workplace [1-2]. Work health and safety is an area encompassing all processes of the work performed. It involves many disciplines and studies were performed about work health and safety in many disciplines [3-4].

The risk assessment process forms the basis of work health and safety activities. Risk assessment is the process of predicting the probability of certain unwanted events occurring, identifying harm and damage that may occur, and making a value judgment by noting the significance of the outcomes. It

encompasses the decision-making process about whether risks are acceptable or not by noting the available checks and controls [5-6].

Studies provide many methods for the analysis of hazards and risks in work environments. At a minimum, the risk assessment to be applied should include systematic processing of data to define hazards in workplaces and to predict the levels of effect on individuals who will be affected as a result of the risk [7].

The main methods of risk assessment in the name of determining hazards and risks in workplaces are as follows [3]:

- Preliminary hazard analysis
- Primary risk analysis
- Risk mapping
- Work safety auditing
- Work safety analysis
- Risk analysis
- What-if analysis
- Hazard and operability analysis
- Failure modes, effects, and criticality analysis
- Failure tree analysis
- Event tree analysis
- Cause-outcome analysis
- Human error analysis
- Human error definition
- Human reliability assessment
- Technique for human error rate prediction
- Hierarchical duty analysis
- Kinney model
- Risk assessment tables
    a) L-type matrix
    b) X-type matrix

Differences in the method used to identify risks are the most important point differentiating risk analysis methods. Some risk assessment methods are used for processes and basic technical systems, while some are used to analyze hazards in the work environment due to the operation of the work [8]. Some risk assessment methods were developed according to certain industries. According to the topic of focus, risk assessment methods may be classified as technical-focused methods, human-focused methods, task-focused methods, management-focused methods, and rough analysis methods [9]. The most commonly used risk analysis method is the L-type decision matrix (5 x 5) [10].

One of the most important points in work safety is to prevent the occurrence of work accidents and occupational diseases with proactive approaches [11]. Risk analysis should be performed as a preventive activity before any accident occurs. The significance of the risks is determined according to the outcomes of the risk analysis. Accordingly, decisions are made to check the precautions that are present and to implement new precautions. It is important for employed individuals and employers to fulfill responsibilities in the stage of ensuring the safety of work conditions with risk analysis [6-10].

Demand for the food sector is increasing in the world and Turkey. The dining hall sector, the topic of our study, is a work area involving many hazards and risks and involves intense labor. There is an increase in the amount of employment in the dining hall sector linked to the increased service areas. It is listed among the least hazardous workplaces according to legislation. However, accidents like injuries,

cuts, and falls are frequently experienced due to problems like rapid work, the use of cutting-incision tools and machines, floor problems, inexperience, and lack of required personal protective equipment. Additionally, while negative physical factors and equipment used to cause work accidents to occur, they also cause reductions in employee performance and effects on health. If work safety precautions are inadequate or don't exist, it may cause occupational diseases, employee loss, and costs [12]. The most important point in the dining hall area is to determine risks and take precautions.

There are many risk areas in the dining hall area including the kitchen, eating areas, and entryways as employees, administrative personnel and students use the dining hall. This study encompasses the whole dining hall area attempted to determine hazards and risks with the aim of preventing the occurrence of possible work accidents and occupational diseases.

2. Material and Method

Due to the Occupational Health and Safety Law No. 6331 published in the Official Gazette on 30 October 2012, businesses are legally mandated to implement and audit work health and safety precautions. This study performed a risk analysis of the working environment for dining hall employees by noting the relevant details of the requirements, obligations, and implementation of the Occupational Health and Safety Law No. 6331. The aim was to offer recommendations about creating a healthier and safer working environment for dining hall employees [13].

The research began by receiving permission to perform a risk assessment from the university. This research was designed with the observational method as a quantitative data collection tool and a risk assessment was created as a result of these observations [14]. The research included general information, operating processes, types of equipment used, occupational groups in the area, work accidents experienced, and occupational diseases for the dining hall where the risk assessment was performed.

The research was completed using the L-type matrix (5 x 5 matrix diagram) risk assessment method. It is used to analyze the relationships between two or more variables. The matrix risk assessment method ensures convenience in terms of applicability while allowing the opportunity to use observations of the study area and records and statistics kept by the business to quantify a variety of risks [15]. The L-type matrix method can be used in the dining hall sector due to having important features like applicability to all sectors, simple and easily understood structure, and comprehension by employees [10-16]

The implementation of the risk analysis performed within this scope followed these stages [17]:

1st Step: Identification of hazards

Working areas involve many hazards and risks due to working conditions or the work done. Identification of hazards present in the workplace is the first step when performing a risk assessment. After determining the job descriptions of individuals employed in workplaces, work and activities are observed. For identification of hazards, all sections of the dining hall were carefully assessed.

2nd step: Assessment of risks

Risk assessment is the most complicated stage of analyzing risks. Any hazards and risks in the workplace are identified and attempts are made to determine how much harm may come to employed individuals. After assessing possible effects that may occur, the degree of damages and hazards that may occur is determined.

3rd step: Rating of risks

Rating of risks in the workplace reveals harm that may occur to the working area and employed individuals. The risks within the structure of the business are grouped as low, moderate, and high risks. Risks determined to be low level do not require emergency action plans, while moderate risks are significant for the workplace and should have interventions performed in the earliest possible duration.

High risks require the creation of emergency action plans and immediate intervention for these risks is important. After grouping the risks, control precautions against these risks are determined [18].

4th step: Planning control precautions

When determining control precautions to be taken, priority should be given to removing the risks. In areas where this is not possible, attempts should be made to reduce the risk level as much as possible. Appropriate control precautions were planned in the risk assessment for the dining hall [10].

In the study, the probability of an event and damage caused was rated with the L-type matrix method [19]. In the L-type matrix method for risk assessment, the risk is calculated with the following formula:

Risk = Probability x Severity

The probability of an event occurring (Table 1) was rated from 1 to 5 as very low, low, moderate, high, and very high probability for the identified hazards.

Table 1. Probability Rating

Points	Probability	Rating
1	Very low	Nearly none
2	Low	Very infrequently (once a year), only in abnormal circumstances
3	Moderate	Infrequently (several times a year)
4	High	Frequently (once a month)
5	Very high	Very frequently (once a week, every day)

A numerical value from 1 to 5 is given in order of severity of damage that may occur from very mild, mild, moderate, serious, and very serious (Table 2). According to damage outcomes, emergency stoppage decisions, loss of labor, and effect on employees are determined for the job.

Table 2. Severity Rating

Points	Outcome	Rating
1	Very mild	No work time lost, requires first aid
2	Mild	No work time lost, no permanent effect, outpatient treatment, requires first aid.
3	Moderate	Mild injury requires admission for treatment
4	Serious	Serious injury, long-term treatment, occupational disease
5	Very serious	Death, permanent incapacity

The risk score matrix table includes the probability on one side and the severity on the other. These two values are multiplied in an attempt to determine the risk value. The horizontal rows in the matrix table give the probability values, while the vertical columns state the severity values (Table 3).

Table 3. Risk score matrix table

		SEVERITY				
		1 (very mild)	**2 (mild)**	**3 (moderate)**	**4 (serious)**	**5(very serious)**
PROBABILITY	**1 (very low)**	1 Insignificant	2 Low	3 Low	4 Low	5 Low
	2 (low)	2 Low	4 Low	6 Low	8 Moderate	10 Moderate
	3 (moderate)	3 Low	6 Low	9 Moderate	12 Moderate	15 High
	4 (high)	4 Low	8 Moderate	12 Moderate	16 High	20 High
	5 (very high)	5 Low	10 Moderate	15 High	20 High	25 Unacceptable

According to the acceptability status of the determined risk level, decisions are made about the tolerability of the risk, requirements to stop work, and prioritization of suitable safety precautions that should be taken (Table 4).

Table 4. Acceptability values for outcomes

Acceptability value	**Precautions to take**
Unacceptable risk 25	Work should not begin until the determined risk is lowered to acceptable levels and if activities continue, they should be stopped immediately. If the risk does not reduce with precautions, the activity should be canceled.
Significant level risk 15-16-20	If there are continuing activities they should stop without delay. Work should not begin until the determined risk reduces. If the risk is related to the continuation of work, precautions should be taken rapidly and the decision made on whether to continue according to the results of precautions.
Moderate level risk 8-9-10-12	Precautions should begin to lower the risk. Time may be taken for precautions taken to lower risk.
Acceptable risk 2-3-4-5-6	There may be a need for additional control processes to eliminate risk. However, current controls should be maintained and these controls should be audited.
Insignificant level risk 1	There is no need to plan control processes for determining risk and there is no need to preserve records of activities that will occur.

In the research, the hazards and risks in the dining hall area were identified. These hazards and risks were individually stated and appropriate assessments were made about precautions to be taken, degree of severity, risk scores, and acceptability values.

3. Findings and Comments

The creation of risk assessment tables is an important and necessary stage. The tables include hazards, risks, people who will be exposed or affected, probability, severity, risk value, significance value and precautions to be taken to lower the risk to an acceptable level. It is important that the table structure is understandable to ensure easy comprehension of the risk assessment by employees.

Sections of the risk assessment table are:

1. **Hazardous event/situation:** States the source or situation which may cause injury to employees, damage to property or the workplace, or both together.
2. **Risk:** States the outcomes that may occur if the hazardous event happens.
3. **Exposed or affected people:** States the people who will be affected or exposed in accident situations that may occur in the working area.
4. **Probability:** States the probability of the hazardous event or situation occurring.
5. **Severity:** Expresses the harm that will be caused by the occurrence of the event.
6. **Risk value:** Expresses the risk number based on multiplication of the probability and severity concepts.
7. **Precautions to lower risk to acceptable levels:** States the solution methods that may be used to remove the risk or lower it to acceptable levels in the workplace.

In this study, the determined hazards and risks were grouped according to risk levels (significant risk: 15, moderate level risk: 32, acceptable risk: 3). These groups are given in Tables 5, 6, and 7.

Risks at a significant level have a risk score from 15 to 20 with a multiplication of the severity and probability values. In the presence of a significant level of risk, work should not begin until the risk status passes or should continue by taking appropriate precautions. Precautions should be taken at the source, in the environment, or by the employee. Risks at a significant level are shown in Table 5. Numbers 1-4 show risks with a risk score of 20, while numbers 5-15 show those with a risk score of 16.

Table 5. Significant level Risk ($15 \leq R \leq 20$)

No	Threat	Risk	Corrective and Preventive Actions
1	Use of cutting implements	Finger injury due to not using protective equipment	Employees using cutting implements should use appropriate protective equipment. Reports should be made of any injuries.
2	Electric cables not placed within protective cable channels	Electrical shock, injury, and death	All electrical cables should be placed in protective channels. There should be no cables on the floor and they should be stored appropriately.
3	Lack of electrical warning signs	Electrical shock, injury, and death	Areas with electrical danger should be noted with appropriate signage and unauthorized people should be prevented from entering the area.

Table 5 continued

No	Threat	Risk	Corrective and Preventive Actions
4	Lack of insulating mats in front of electrical panels	Electrical shock, injury, and death	Insulating mats should be placed in front of electrical panels. There should be warning labels and signs on the panel. Maintenance and examination should be performed and personnel should use appropriate personal protection when working.
5	Stoves used in the dining hall	Injury, fire, work accident	Stoves should be used by authorized people and appropriate training should be given. Employees should use appropriate protection against danger.
6	Lack of warning signs on machinery	Work accident	All machinery and equipment used should have appropriate warning signs and labels.
7	Biological risks and hygiene training	Unaware working and infectious disease	Employees should be informed about biological risks that may be encountered. Hygiene training should be planned and given.
8	Pest control and spraying	Infectious disease	Pest control and spraying should be performed in the workplace regularly. Implementations should be recorded.
9	Lack of cleaning and maintenance of cooking hoods	Fire	Hoods should have periodic cleaning and maintenance performed and recorded.
10	Locking of cold storage	Freezing due to remaining locked	Employees should not enter the cold storage alone, there should be a watcher at the door.
11	Lack of cold storage warning system	Freezing due to remaining locked	There should be a light and sound warning within the cold room and it should be operational.
12	Hot surfaces	Burns	If employees have to be in contact with hot surfaces due to work, they should use heat-resistant gloves.
13	Potlids on hot foods should not be opened without checking	Work accident	Lids on pots should not be opened without checking. Contact of steam with the body should be prevented.
14	Untrained employees should not use cutting tools	Unaware use and work accident	Training should be provided to employees using cutting implements. Employees should be informed about possible dangers while working with these tools.
15	Care should be taken of height and balance factors when placing materials and tools	Material falls and injury	Care should be taken of height and balance when placing tools and materials on top of each other. They should be placed to prevent falls or topples.

Moderate level risks have risk scores between 8 and 12 due to the multiplication of severity and probability values. Precautions should be taken rapidly to reduce risk. Moderate level risks are shown in Table 6. Numbers 1-22 are risks with a score of 12, numbers 23-25 have a risk score of 10, numbers 26-30 have a risk score of 9, and numbers 30-32 have a risk score of 8.

Table 6. Moderate level Risk ($8 \leq R \leq 12$)

No	Threat	Risk	Corrective and Preventive Actions
1	Slippery floor	Slips, falls and injury	Slippery floor areas due to spills of liquids like water and oil should be determined and warning signs placed. Entry of people to the area should be prevented before cleaning.
2	Personnel wearing large and baggy clothing	Work accidents	Large and baggy clothing should not be allowed in the workplace. If hair is long it should be tied up, and accessories like rings and bracelets should not be used.
3	Joking	Work accidents	One of the factors causing work accidents is dangerous behavior. This type of behavior should be avoided in workplaces.
4	Thermal comfort	Discomfort, overwhelm	Suitable thermal comfort conditions should be ensured. Regular maintenance should be performed on ventilation equipment.
5	Irregular stacking of materials	Material falling and injury	Materials should be stacked suitably. Preventive steps should be taken to prevent falls from shelves.
6	Passageways not regular or clear	Tripping, falling, injury	Passageways should be clean and maintained. The material being left in corridors and passageways should be prevented.
7	Fractured and broken floor	Falls and injury	Fractured and cracked floors should be removed.
8	Handbasins and toilets	Infectious disease	Cleaning should be performed at appropriate periods, there should be sufficient ventilation, and cleaning materials that may react with each other should not be used. Cleaning personnel should use gloves, masks, and protective clothing.
9	Noise	Work accidents, occupational disease, hearing loss	Measurements should be repeated annually. Before limit values for dining hall environments are passed, firstly the source, then the environment, and finally personal precautions should be taken.
10	Carrying heavy weights by hand	Muscular and skeletal system disease, disability	Heavy loads should not be carried by hand. Carrying equipment should be available for this work.

Table 6 continued

No	Threat	Risk	Corrective and Preventive Actions
11	Ergonomic problems	Muscular and skeletal system disease	Activities should be performed according to instructions. Suitable areas for ergonomic work should be developed, employees should be given ergonomic training.
12	Unsuitable physical measurements of equipment like chairs, counters	Muscular and skeletal system disease	The physical condition of equipment used by employees and students should be appropriate. Counters should ensure a suitable working area for employees.
13	Fire extinguishing devices not fixed to the wall	Late intervention for fires	Appropriate fire extinguishers should be provided according to the Regulation on Protection of Buildings from Fire
14	Care and maintenance of fire extinguishers	Late intervention for fires, injury, death	Care and maintenance should be performed for fire extinguishers according to the Regulation on Protection of Buildings from Fire
15	Use of latex gloves	Latex allergy	Hypoallergenic gloves should be used.
16	Inadequate ventilation	Discomfort, overwhelm	Ventilation should be provided in areas without natural ventilation. Periodic maintenance of ventilation systems should be performed.
17	Natural gas used in stoves	Gas leak, injury	Precautions should be taken against gas leaks, department heads and employees should be informed of malfunctions, malfunctions should be rapidly dealt with.
18	Communication problems between employees	Physical and verbal violence, stress	Employees should be given training about communication, stress management, and anger control. Psychological support should be provided.
19	Oven	Work accidents	Ovens should be operated by authorized personnel. Periodic checks and cleaning should be regular, employees should use oven gloves.
20	Waste and waste containers	Infectious disease	Waste should be removed appropriately at the end of work. Bags in waste containers should be single-use and lids of containers should be kept closed.
21	Dining hall cleaning	Work accidents, unaware use, poisoning	Care should be taken of warnings concerning the use of cleaning materials. In case of contact, hands and eyes should be washed with lots of water.
22	On-the-job training	Work accidents, occupational disease	Newly starting personnel should be given on-the-job training. Information should be given about working areas and activities.

Table 6 continued

No	Threat	Risk	Corrective and Preventive Actions
23	Lack of safety net in stairwells	Falls and injury	Stairwells should have safety nets installed. The integrity of nets should be checked at suitable intervals.
24	Obstacles in front of fire extinguishers	Delayed intervention for fires and injury	Obstacles in front of fire extinguisher cabinets should be removed.
25	Vibrations	Muscular and skeletal system disease, a circulation disorder	Maintenance should be performed on devices that may cause vibration. Contact between moving parts should be prevented, employees should take regular breaks.
26	The messiness of work area	Injury	After finishing activities, materials should be put in their place. Apart from the equipment used, the material should not be left in the work area.
27	Inadequate lighting	Trips, falls, collisions	Natural and artificial lighting should be at sufficient levels. Apparatus used for lighting should be appropriate for lighting requirements.
28	Drain grids	Trips, slips, falls	Drain grids and floors should be on the same level. Drain grids should be made of a material that is not slippery. Grid intervals should abide by standards.
29	Doors and entries	Injury, confusion	Doors and entryways should be organized according to the Regulation on Health and Safety Measures to be Taken in Workplace Buildings and Extensions
30	No use of personal protective equipment	Work accidents and injury	Based on the quality of the work, appropriate personal protective equipment should be used. Employees should be given training about equipment.
31	Cabinets not secured.	Injury due to toppling cabinets	Cabinets should be secured against toppling.
32	Raw vegetables and fruit	Infection, transmission	Care should be taken of hand hygiene. Employees should be informed of infection risk.

Acceptable level risks have a risk score between 2 and 6 due to the multiplication of severity and probability values. In the presence of acceptable risk, current checks should be maintained without the need for additional control processes. Acceptable level risks are shown in Table 7. Numbers 1-2 have a risk score of 6, while number 3 has a risk score of 3.

Table 7. Acceptable level Risk ($2 \leq R \leq 6$)

No	Threat	Risk	Corrective and Preventive Actions
1	Trays and containers used to carry food	Poisoning, infectious diseases	Trays and containers should be able to be cleaned and disinfected. They should be kept clean and in good condition to prevent the transmission of harmful material in food.
2	Accumulation of materials	Tripping and falling	All materials should have their own storage area. They should not be stacked.
3	Chipped and fractures plates used in the dining hall, construction of tables	Cut injuries, health problems	Tables should be easy to clear, chipped and fractured plates should be separated from intact ones.

4. Discussion

This study determined the hazards and risks encountered in the dining hall environment. Risks at a significant level in dining hall environments can cause serious harm, like injuries, disability, permanent incapacity for work, or death to individuals. Risks at a significant level are caused by electricity, use of cutting tools, machinery and stoves, storage areas, biological factors, placement of material at high locations, hot surfaces, and hazardous behavior and situations. Risks at a moderate level in dining halls appear to be due to the working environment, floor, thermal comfort conditions, carrying heavy loads, sinks, ergonomic conditions, cleaning, chemical use, doors and columns, and fire extinguishers. Risks at acceptable levels emerge due to trays and containers used, use of fractured or chipped equipment, and accumulation of material.

According to the findings obtained in our study, while some hazards and risks are due to the material and equipment used in dining halls, some are due to the quality of the work performed. Lack of initial work related to the job and general training, intense work tempo, and deficient use of personal protective equipment increase risk levels.

There is no study in the literature performed in a university dining hall, the topic of our study, though there are parallel studies available.

A study stated that muscular and skeletal system diseases are frequently observed due to causes such as carrying heavy loads and standing for long durations in dining hall working areas [20]. Other studies revealed that hazards and risks like slippery floors, equipment used, distribution of workload, time anxiety, stress, chemical, and biological factors caused work accidents. Burns and injuries were frequently experienced due to hot surfaces and liquids [21]. In these studies, it was concluded that providing training related to the job and using personal protective equipment would reduce or resolve the hazards and risks. Ensuring work health and safety conditions and increasing awareness of safety leads to the steps that need to be taken to prevent work accidents and occupational diseases. Another study in a dining hall area was performed using the Fine-Kinney method [11]. In this study, training was given related to the job and it was concluded that the use of personal protective equipment reduced or removed hazards and risks.

5. Conclusion and Recommendations

Great changes brought by technology in working life have made life more convenient for humans and ensured the development of social welfare. However, in addition to these technological developments, the use of chemical materials and mechanization have led to many diseases and hazards. The emergence of occupational diseases, work accidents, and environmental problems have led to the need for work health and safety precautions and made them mandatory.

The dining hall in the research is an area where food material is brought, stored, distributed and collected, and cleaned after consumption. University dining halls are working environments with intense workflow in order not to disrupt the dining requirements of students. Due to the labor-intensive working environment, work health and safety gain great importance in order for employed individuals to do their jobs. The dining hall environment involves many physical, biological, chemical, ergonomic, and psychosocial hazards and risks. This study aimed to reveal the hazards and risks present and to determine precautions that should be taken in the dining hall area. Some of these hazards and risks are encountered due to structural problems, use of machinery, use of cutting tools, damaged or degraded equipment, and errors in use.

The L-type matrix method used for risk analysis in the research is easy to apply and understand. The advantages of the L-type matrix method ensure ease of use compared to other risk analyses. Additionally, the probability is an important factor in the L-type matrix method. However, apart from the probability variable in order not to encounter surprise work accidents, processes are each informational probability estimates (identification of hazard, severity variable, who will be affects, tolerability of risk, precautions, work stoppage, etc.). From this aspect, the reliability of probability estimates for all processes should be investigated [15].

This study identified the present and potential risks in a dining hall environment to ensure benefits in preventing work accidents or occupational diseases among employees. Employees and authorized persons taking precautions against the determined risks will prevent potential injury, disability, or death. The risks determined in the dining hall area should be removed or reduced by taking precautions at the source, in the environment, or in person.

An important step in ensuring work health and safety conditions is to provide information and training about hazards and risks that may be encountered due to the job and working environment to dining hall employees. All employed individuals should be informed about work health and safety culture. Appropriate policies should be determined with the aim of ensuring health and safety-related to activities. Employed individuals should be supported in psychological terms to provide full well-being. Work accidents, occupational diseases, injuries and near-miss events experienced in the workplace should be recorded. The most appropriate personal protective equipment for the job should be determined and employees should be trained about its use. Periodic maintenance and checks of machinery, equipment, tools, and materials used in the workplace should be performed and recorded. Abiding by the precautions taken will ensure the creation of a healthier and safer working environment.

Ethical Statement: In this study, biological material belonging to humans or animals was not used. The research did not require ethics committee permission as it was a risk analysis study.

Conflict of interest: There is no conflict of interest.

Authors' Contributions :

K.O.: Conceptualization, Methodology, Formal analysis, Writing - Original draft preparation, Investigation (%50).

A.O.: Conceptualization, Methodology, Resources, Investigation (%50).

All authors read and approved the final manuscript.

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